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APGAR'S NEW
PLANT ANALYSIS

ADAPTED TO ALL BOTANIES

BY

E. A. AND A. C. APGAR



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PREFACE TO THE REVISED EDITION.

IN this revision of the "Plant Analysis," several new and important features have been added. The Analytical Arrangement of Botanical Terms has been enlarged. It now includes a vocabulary sufficiently full for the description of specimens from all the orders of flowering plants. The Order of Description has been extended with a view to the encouragement of a more careful and scientific examination of the parts of plants.

To the right of "Remarks" space is reserved for drawings of the more important or characteristic organs of the plant examined. This exercise is recommended as of the highest importance in promoting careful botanical work.




Specimen Pages have been inserted as samples to show how the various orders of plants, though differing widely in their characteristics, can, by the use of a single blank form, be described with sufficient fullness for satisfactory analysis.





If, in any case, there is not sufficient room in the blank for a complete description, the words should be abbreviated rather than omitted.

ANALYTICAL ARRANGEMENT OF BOTANICAL TERMS.

ROOTS.

KINDS.—(1) **Primary**, growing from root-end of embryo.

(a) **MAIN OR TAP.**—*Conical*, ; *napiiform*, ; *fusiform*, 

(b) **MULTIPLE.**—*Moniliform*,  necklace-like. *Fasciculated*,  tufted, thick and fleshy. *Tubercular*,  having small tubers. *Fibrous*,  thread-like.

(2) **Secondary**, growing from stems.

(a) **UNDERGROUND**, starting from stem below ground, as the roots of cuttings.


(b) **AERIAL**, starting from stem above ground (Indian Corn).

DURATION.—(1) **Annual** ②, living one year or less (Corn).

(2) **Biennial** ②, living two years (Turnip).

(3) **Perennial** ③, living many years.

STEM.

PARTS.— *n*, Node, part to which the leaf is fastened.

i, Internode, portion between nodes.

a, Axil, angle between leaf and stem, upper side.

CLASS.—(1) **Exogenous**, outside-growing (Maple, Elm).

(2) **Endogenous**, inside-growing (Corn-stalk, Timothy).

SITUATION.—(1) **Above ground**, usually leaf-bearing.

(2) **Under ground**, scale-bearing.

Stems above Ground.

CHARACTER.—*Herbaceous*, soft, not woody (Four-o'clock).


Sufrutescent, slightly shrubby (Toad-flax).


Sufruticous, shrubby at base (Trailing Arbutus).

Fruticous, shrubby (Currant-bush).

Arborescent, tree-like (Flowering Dogwood).


Arboreous, tree (Elm).

DIRECTION OF GROWTH.—*Creeping* or *Repent*,  prostrate and rooting from the under surface (Partridge-berry). *Procumbent*, prostrate, but not rooting (Purslane).

Decumbent,  reclining on the ground as if too weak to stand; tip erect (Verbena).

Assurgent,  ascending obliquely (Japan Lily).

Erect, upright (Indian Corn).

Scandent,  climbing with tendrils or rootlets (Grape, English Ivy).

Voluble,  twining (Morning-glory).


Declinate,  declined or bent downward (Blackberry).


Diffuse,  loosely spreading (Red Currant).


FORM.—*Terete*, ○; *compressed*, ◌; *grooved*, ☆; *angular*, ☆; *square*, □; *triangular*, △; *winged*, ◻.


SURFACE.—See under LEAVES.


KINDS OF STEMS AND BRANCHES.—*Culm*, or Straw-stem (Grass, Sedge).


Sucker,  a branch of subterranean origin that finally rises out of the ground. The Raspberry multiplies in this way.


Offset,  a short, prostrate-rooting branch with a tuft of leaves at the end (Houseleek).

Runner,  a long, prostrate-rooting branch with tuft of leaves (Strawberry).





Stolon,  a branch that curves downward and takes root. The Currant multiplies in this way.

Tendril,  a thread-like coiling branch used for climbing.

Spine or *Thorn*,  a hard, sharp-pointed branch.

Dichotomous,  two-forked.

Stems under Ground.

- KINDS.**—*Rhizoma* or *Rootstock*,  a perennial, horizontal stem, partially or wholly subterranean (*Calamus*).
Tuber,  an enlarged stem with eyes (*White-potato*).
Bulb,  a bud, usually subterranean, with fleshy scales.
Scaly bulb (*Lily*); *Tunicated* or *Coated bulb* (*Onion*).
Corm,  a solid bulb (*Indian Turnip*).
Caudex, an elongated corm (*Trillium*). The term *Caudex* is also used for such stems as the trunk of a *Palm-tree*.

LEAVES.


PARTS.—*b*,  *Blade*, the expanded portion.


p, *Petiole*, the stem.

s, *Stipules*, leaf-like appendages at base of petiole.

ARRANGEMENT.—(1) *Cauline*, on the stem above ground.

Alternate,  at alternate heights.

Opposite,  on opposite sides.

Whorled,  verticillate.

Fasciculate,  in bundles.

Scattered, closely and often irregularly arranged along the stem.

(2) *Radical*,  near the ground.

Rosulate,  in a rosette.

Equitant,  astraddle (*Iris*).

KINDS.—(1) *Simple*,  having but one blade.

Sessile,  without petiole.

Petiolate,  with petiole.

Stipulate,  with stipules.

Cirrus,  with tendrils.

(2) *Compound*,  having more than one blade.

(a) *PINNATE*,  with leaflets arranged along a common petiole.

Abruptly pinnate,  with even number of leaflets.

Odd-pinnate,  having an odd leaflet.

Unipinnate,  divided but once.

Bipinnate,  divided twice.

Tripinnate, divided three times.

(b) *PALMATE*,  leaflets diverging from one point.

Unipalmate,  divided but once.


Bipalmate,  divided twice.

Tripalmate,  divided three times.

Decomposed, many times compounded.

Compound leaves, as well as simple ones, can be *sessile*, *petiolate*, *stipulate*, and *cirrus*.

FRAMEWORK.—*Midrib*, the central vein.

Ribs,  strong veins branching from near the base of midrib.

Veins, the branching framework.


Veinlets,  small veins.


VENATION.—(1) *Parallel-veined* or *nerved*, fine veins parallel to each other.


Basal-nerved,  nerves all from the base.


Costal-nerved,  nerves from the midrib.

(2) *Netted-veined* or *reticulate-veined*, with veins and veinlets that unite and separate, forming a network.

Feather-veined,  with lateral veins branching from midrib.





Straight-veined,  the lateral veins straight and parallel.

Radiate-veined,  with strong veins branching from apex of petiole.



Ribbed,  with strong ribs parallel to each other (*Plantain*).

The term *keeled* is applied to leaves or bracts which have the midrib projecting so as to form a sharp, longitudinal ridge (the glumes of many grasses).

FORM.—(1) Broadest at the Middle.—Orbicular, ;


oval, ; elliptical, ; oblong, ; linear, ;

acerose,  (Larch, Pine).


(2) Broadest at the Base.—Deltoid, ; ovate, ;




lanceolate, ; subulate, ; cordate, ; reni-

form, ; hastate, ; sagittate, .

(3) Broadest at the Apex.—Obovate, ; oblanceolate,



; spatulate, ; cuneate, ; obcordate, ;





lyrate, ; runcinate, .




BASES.—Auriculate, ; oblique, ; tapering, ;

abrupt, ; clasping, ; perfoliate, ; connate,

; decurrent, ; peltate, .



APEXES.—Obovate, ; emarginate, ; retuse,


; truncate, ; obtuse, ; acute, ; acumi-



nate, ; mucronate, ; cuspidate, ; aris-

tate, .



MARGINS.—Entire, ; repand, ; sinuate,

; crenate, ; crenulate, minutely crenate; dentate,

; denticulate, minutely dentate; serrate,

; serrulate, minutely serrate; incised, ; lacinate,



; palmately-lobed, ; palmately-cleft, ;

palmately-parted, ; palmately-divided, ; pin-

nately-lobed, ; pinnately-cleft or pinnatifid, .


pinnately-parted,  pinnately-divided, ; revolute, edges rolled over; ciliate, bordered with hairs.

KINDS OF STIPULES.—*Stipels*, the stipules of leaflets (*Wistaria*).


Ocrea,  sheathing (Buckwheat); *ligule*, 

membranous projection of the sheath in grasses; *free*,

 (Quince); *adnate*,  (Rose); *cirrus*,

 (Greenbrier); *prickly* (Locust). Stipules are sometimes *bud-scales* (Magnolia).

KINDS OF PETIOLES.—*Phyllodia*, when expanded into a

blade; *rhachis*,  the prolongation among leaflets;

winged, with leaf-like borders; *cirrus*, forming a climbing

organ (Clematis); *sheathing*,  surrounding the stem (Grasses).

SURFACE.—(1) Without Hairs.—*Glabrous*, smooth.

(2) Soft Hairs.—*Pilous*, few, short; *hirsute*, few, long; *pubescent*, dense, short; *villous*, dense, long; *sericeous*, silky; *lanuginous*, woolly; *tomentous*, matted like felt; *flocous*, fleecy tufts.

(3) Stiff Hairs.—*Scabrous*, minute, hard points; *hispid*, few, short points; *setous*, bristly; *spinous*, having spines.

COLOR.—*Glaucous*, covered with whitish powder.

Canescent, grayish-white with fine pubescence.

Inodorous, hoary-white.


Punctate, having transparent dots.


Hyaline, nearly transparent.


TEXTURE.—*Succulent*, fleshy; *coriaceous*, leather-like; *scari-*
ous, dry; *rugous*, wrinkled.


The termination *us* of the above words is often changed to *ae*, and then the accent falls upon the last syllable—as, *pillous*, *pilose*.


VERNATION, arrangement in the bud.


Inflexed,  folded crosswise (Tulip-tree).


Conduplicate,  folded along midrib (Oak, Peach).

Plicate,  folded like a fan (Red-currant, Birch).

Circinate,  rolled lengthwise (Fern).

Convolute,  rolled edgewise (Apricot, Plum).

Involute,  edges rolled inward (Common Blue Violet).

Revolute,  edges rolled outward (Willow, Azalea).


DURATION.—*Efugacious*, falling very early.


Deciduous, falling at the close of the season.


Persistent, remaining through the winter.

INFLORESCENCE.

PARTS.—*Flower*,  the blossom.

Peduncle,  the stem of a solitary flower or the main stem of a flower-cluster.

Scape,  a peduncle that grows from the ground.


Pedicel,  *p*, the stem of each flower of a flower-cluster.

Rhachis, the axis of a flower-cluster.

Bracts, *b*, small floral leaves.

Involucre,  a cluster of bracts.

Involucel, secondary involucre of compound clusters.


Glumes,  chaff-like bracts of Grasses and Sedges.

Palea or *Chaff*, the bracts among the flowers of a head (Sunflower).

The inner glumes of a spikelet of grasses are also called *palea*.

KINDS.—(1) *Solitary*, single, alone.


Terminal, at the summit of the stem.


Axillary,  in the axils of the leaves.


(2) *Clustered*, several flowers collected in a bunch.

(a) *INDEFINITE* or *INDETERMINATE*, flowering from axillary buds. Inflorescence centripetal.

Flowers
Pedicellate.


Raceme,  flowers arranged along the axis; pedicels about equal in length (Currant).

Corymb,  same as raceme, except that the lower pedicels are elongated, making the top flat (Hawthorn).


Umbel,  same as corymb, except that the pedicels branch from about the same point (Milkweed).

Panicle,  compound raceme (Bluegrass).

Thyrus, a compact panicle (Lilac, Horse-chestnut).

Spike,  same as raceme with flowers sessile (Mullein).


Spikelet,  the ultimate spikes of grasses.

Spatha,  a fleshy spike, generally enveloped by a large bract called a *Spatha*, (Calla Lily).

Ament or *Catkin*,  a slender, usually pendent spike, with scaly bracts (Birch).


Head or *Capitulum*,  a shortened spike, reduced to a globular form (Clover).


(b) *DEFINITE* or *DETERMINATE*, flowers all terminal. Inflorescence centrifugal.

Cyme,  flat-topped or rounded inflorescence (Elder).

Fascicle, a compact cyme (Sweet-William).

Glomerule, a cyme condensed into a head (Mint).


Verticillaster,  two opposite glomerules joined (Motherwort).


Scorpioid,  a one-sided and coiled cyme (Forget-me-not).


FLOWER.

PARTS.—*Receptacle*, the part upon which the several organs of the flower are inserted.


Calyx,  the exterior floral envelope.



Corolla,  the interior floral envelope. The calyx and corolla constitute the *protecting organs*, called *perianth*, especially when they are much alike.

Stamens,  the fertilizing organs.

Pistils,  the seed-bearing organs. The stamens and pistils constitute the *essential organs*.

KINDS.—*Symmetrical*,  same number in each set of organs; *unsymmetrical*, different number.

Complete,  all the four sets present; *incomplete*, some sets wanting.




Regular,  sepals and petals uniform; *irregular*,  sepals or petals unlike.

Perfect, stamens and pistils both present; *imperfect*, one set absent.

Staminate, with stamens but no pistil; *pistillate*, with pistils but no stamens; *neutral*, with neither.

Monocious, staminate and pistillate flowers on the same plant; *dicocious*, on different plants; *polygamous*, staminate, pistillate, and perfect on the same plant.


Dichlamydeous, having calyx and corolla; *monochlamydeous*, having calyx only; *achlamydeous*, having neither.

D4,  *tr4*, *tetrd*,  *pentid-merous*,  two, three, four, or five parts in each set.


Sessile, without peduncle; *pedunculate*,  with peduncle.

DEVIATIONS FROM THE NORMAL OR PATTERN FLOWER ARISE FROM

Augmentation, increase of floral circles (Water Lily).

Chorisis, increase of organs by division. The Bleeding-heart shows the *collateral chorisis* of stamens, and the Catchfly  shows the *transverse chorisis* of corolla.

Anteposition, parts opposite instead of alternate (Grape).

Cohesion,  union of parts of the same set (corolla of Morning-glory).

Adnation, union of different sets. In the Cherry, the stamens and corolla are inserted upon the calyx.

Irregularity, parts of the same set unequally developed (Violet, Pea).

Suppression, non-development of some parts. In the mints, some of the stamens are suppressed or wanting.

CALYX.




PARTS.—*Sepals*,  the divisions of the calyx.


Tube, the united portion of a gamosepalous calyx.

Throat, the orifice or summit of the tube.

Limb or *border*, the spreading portion.

Teeth or *lobes*, the distinct or divided portions of the border.


Pappus,    the calyx-border consisting of scales, teeth, bristles, or slender hairs as found in Compositae.

COHESION.—*Gamosepalous* or *Monosepalous*,  sepals partially or wholly grown together.

Truncate,  without lobes.

Toothed,  lobes small.

Lobed,  parted about one fourth.

Cleft,  parted about one half.

Parted,  separated nearly to the base.

Polysepalous,  separated to the base.

ADNATION.—*Inferior*,  calyx free from ovary.


Half-inferior,  calyx adherent to the ovary half-way.

Superior,  calyx adherent to the ovary.


FORM.—See under COROLLA.

ESTIVATION.—See under COROLLA.


COROLLA.

PARTS.—*Petals*,  the divisions of the corolla.

Lamina, the expanded portion of the petal.


Claw,  the stem portion of the petal.

Spurs,  ; *s*, the hollow portion of certain corollas.

Crown,  a coronet-like appendage to certain corollas (Catchfly, Narcissus).

Crest, an elevated, usually roughened ridge found on some corollas.


Tube, *throat*, *limb*, and *lobes*, as under CALYX.


COHESION.—*Gamopetalous* or *Monopetalous*,  petals partially or wholly grown together.

Truncate,  *toothed*, *lobed*,  *cleft*, *parted*, as under CALYX.

Polypetalous,  petals separate.

ADNATION.—*Hypogynous*,  corolla attached under the pistil (*gynia*, pistil).

Perigynous,  corolla attached to the calyx. It is thus around the pistil.

Epigynous,  corolla attached to the ovary. It is thus upon the ovary which is a part of the pistil.


FORM.—(1) *Gamopetalous*.


(a) **REGULAR.**—*Urceolate*,  urn-shaped (Whortleberry).

Tubular,  cylindrical (Trumpet Honeysuckle).

Campdnulate,  bell-shaped (Harebell).

Infundibular,  funnel-shaped (Morning-glory).


Salver-shaped,  with a flat border spreading from a slender tube (Phlox).


Rotate,  wheel-shaped, tube short or none (Potato).

(b) **IRREGULAR**.—*Ligulate*,  strap-shaped (Dandelion).


Labiate, two-lipped.

Galeate,  upper lip arched (Catmint).

Ringent,  both lips arched (Dead-nettle).


Personate,  throat closed (Toad-flax).

(2) Polypetalous.


(a) **REGULAR**.—*Rosaceous*,  petals without claws (Rose).

Liliaceous, petals with claws gradually spreading (Lily).

Caryophyllaceous, long claws inclosed in a tube (Pink).


Cruciferous,  four clawed petals in the form of a cross (Mustard).


Stellate, star-shaped (Chickweed).


(b) **IRREGULAR**.—*Papilionaceous*,  butterfly-shaped (Bean).

PARTS.—*Vexillum*, banner; *alae*, wings; *carina*, keel.


ESTIVATION, the arrangement of the floral organs in the bud.


Valvular,  pieces met by their margins (Lilac).


Induplicate,  margins turned inward (sepals of Clematis).


Reduplicate,  margins turned outward (sepals of Hollyhock).


Convolute or *contorted*,  each piece overlapping its neighbor in one direction (Geranium).


Imbricated,  one or more petals wholly outside.

Quincuncial,  five petals, two without and two within, and the remaining one with one edge outside and the other inside.

Tricéttous,  three petals, one without and one within, and the remaining one with one edge outside and the other inside.


Vexillary,  having one large petal inclosing the others (Pea).

Plicate,  the folding of gamopetalous flowers.

Supervolute,  with folds turned obliquely in the same direction (Morning-glory).

Crumpled, wrinkled or in folds (Poppy).

STAMENS.

PARTS.— *Anther*, the enlarged and essential portion.

Filament, the stem holding the anther.

Pollen, the fertilizing powder found in the anther.


KINDS.—*Sessile*,  anther without filament.


Sterile, filament without anther.

Connivent,  converging.

Eserted,  protruding out of corolla.

Included, entirely within the corolla.

Didynamous,  four in number, two long and two short.

Tetradynamous,  six in number, four long and two short.

COHESION.—*Syngenesious*,  united by their anthers (Dandelion).

Monadelphous, united by their filaments into one set (Hollyhock).

Diadelphous, united into two sets.

Polyadelphous, united into many sets.

Distinct, entirely separate.

ADNATION.—*Hypogynous*,  borne on the receptacle.

Perigynous,  borne on the calyx.

Epipetalous, borne on the corolla.

Alternate,  alternate with the lobes.

Opposite, in front of the lobes.

Epigynous, borne on the ovary at its summit.

Gynandrous, borne on the style (Orchid).

FILAMENT.

KINDS.—*Filiform*, thread-like; *subulate*, awl-shaped; *dilated*, expanded; *petaloid*, petal-like; *bidentate*, two-toothed, etc.

ANTHER.

PARTS.—*Lobes* (*theae*) and *connective*.

ADNATION.—*Innate*,  anther firm on summit of filament.


Adnate,  anther attached by its whole length to filament.


Extrorse, facing the petals.


Introrse, facing the pistils.

Versatile,  attached near the middle.


DEHISCENCE.—*Longitudinal*,  opening lengthwise.

Transverse,  opening crosswise.

Porous,  opening by terminal holes.


Valved,  opening by valves or doors.


PISTIL.


PARTS.— *Stigma*, the rough end to which the pollen adheres.

Style, the stem holding the stigma.

Ovary, the enlarged portion containing the ovules.

COHESION.—*Simple*,  having but one cell, placenta, style and stigma, the whole forming a single *carpel*.

Multiple,  a collection of simple pistils (Blackberry).


Compound,  simple pistils grown together, each called a *carpel*.


STIGMA.

KINDS.—*Sessile*, stigma on ovary; no style.


Globose, globular (Four o'clock).

Discoid,  flat-topped (Poppy).

Capitate,  globular, style slender (Woodbine).

Stellate,  starlike (Evening Primrose).

Lobed,  parts rounded.

Feathered,  plume-like (Grasses).

Linear, thread-like (Corn).

STYLE.


KINDS.—*Basal*, attached to base of ovary (Forget-me-not).

Lateral, attached to side of ovary (Strawberry).

Terminal,  attached to top of ovary.

OVARY.


PARTS.—*Placenta*, the parts to which the ovules are attached.


Dissepiments,  partitions.


Cells, cavities in which the ovules are arranged.


Ovules, unfertilized seeds.

ADNATION.—*Inferior*,  calyx adherent to ovary, same as superior calyx.

Superior,  calyx free from ovary, same as inferior calyx.

PLACENTATION.—*Free-central*,  ovules attached to a central column in a one-celled ovary (Pink).

Axillary,  ovules attached to a central column in a more than one-celled ovary.

Parietal,  ovules attached to the outer walls of the ovary.

Basal, ovules attached to the base of the cell.

OVULE.



PARTS.—*Nucleus*, *n*, the essential part in which the embryo is formed.

Primine, *p*, the exterior coat.

Sécondine, *s*, the interior coat.

Micropyle, *m*, the opening of the ovary coat.

Funiculus, the stem to which the ovule is attached.


Hilum, *h*, the point of attachment on the ovule.


Chalaza, *c*, the place where the coverings and nucleus join.

Rhaphe, *r*, the connection between the hilum and the chalaza.






N. B.—Through the funiculus, the rhaphe, and the chalaza, the ovule receives its nourishment from the placenta. Through the micropyle it receives the tubular prolongation of the pollen.

KINDS.—*Orthótropous*,  straight; no change in direction of parts (Buckwheat).

Campylótropous,  curved; the micropyle brought near the chalaza (Bean).

Andropous,  inverted; the micropyle brought near the hilum, pointing to the placenta. Rhaphe the whole length of the ovule (Magnolia).

Amphítropous,  half inverted; short rhaphe (Mallow).

DIRECTION OF OVARY.—*Erect*, ; *ascending*, ; *horizontal*, ; *pendulous*, ; *suspended*, .

FRUIT.


PARTS.—*Seed*, the part containing the embryo.

Pericarp, the covering of the seeds, including the ovary and all adnate parts. The parts of the pericarp are *epicarp*, or outer coat; *mesocarp*, or middle coat; and *endocarp*, or inner coat.

DEHISCENCE.—*Septicidal*,  opening of the partitions.

Loculicidal,  opening at the dorsal suture.

Septifragal,  valves falling away from partitions.

Circumscissile,  opening by a circular, horizontal line.

KINDS.—(1) **Simple Fruits.**—Those formed by the ripening of a single (simple or compound) pistil.

(a) **FLESHY FRUITS.**—Those which are more or less soft and juicy throughout.

Berry, seeds immersed in a pulpy mass (Grape, Currant).

Hesperidium, with leathery, separable rind (Orange).

Pépo, with a hard rind (Cucumber, Watermelon).

Pome, apparently a berry, but the seeds inclosed in several cartilaginous cells (Apple).

(b) **STONE FRUITS.**—Outer part fleshy; inner part hard or stony.

Drupe, three-coated (skin, flesh, stone); stone-cell without partition (Peach).


(c) **INDEHISCENT DRY FRUITS.**—Those usually with one seed and one coat.

Achene,  coat separable from seed (Dandelion, Butter-cup).

Utricle, coat inflated (Goosefoot). Some utricles are dehiscent (Amaranth).

Caryópsis, or *Grain*, coat inseparable (Wheat).

Nut, a larger and harder fruit (Chestnut).

Glans, a nut invested with a *cupule*,  (Aorn).


The Walnuts and Hickory-nuts are peculiar, and apparently drupaceous.

Samāra,  having winged appendages (Maple, Ash).


(d) **DEHISCENT DRY FRUITS OR PODS.**

Simple pistil. *Follicle*,  opening by only one suture (Columbine).


Legūme,  opening by both sutures (Bean).

Loment,  a jointed legume (Desmodium).


Capsule, any compound, dehiscent fruit.

Siliqua,  a two-valved capsule (Mustard).

Compound pistil. *Silicle*,  a short siliqua (Shepherd's Purse).

Pyxis,  a capsule with circumscissile dehiscence (Purslane).

The Pyxis is sometimes formed from a simple pistil (Jeffersonia).

(2) **Aggregate Fruits**, .—A cluster of carpels on one receptacle taken as a whole (Raspberry, Blackberry).

(3) **Accessory or Anthocarpous Fruits.**—Those of which the most conspicuous portion, although appearing like a pericarp in some cases, does not belong to the pistil (Rose-hip, Apple).

(4) **Multiple or Collective Fruits.**—Those which result from the aggregation of several flowers into one mass (Pineapple, Mulberry).

Strobile or *Cone*, a scaly, multiple fruit, resulting from the ripening of some kinds of catkins (Hop, Conifers).

Gulbalus, a closed cone (Juniper-berry, Red Cedar).

SEED.



PARTS.—*Integuments*, seed-coats. *Nucleus*, part containing the embryo.


(1) **Parts of Integuments:**

Testa (*episperm*), the outer or proper seed-coat.

Tegmen (*endopleura*), the inner coat; sometimes wanting.

Funiculus, *Hilum* (*h*), *Chalazæ* (*c*), *Rhaphæ* (*r*), are the same as in ovule.

Aril, covering exterior to the integuments (not in the ovule) (May-apple, Water-lily).

Coma,  a tuft of hairs on certain seeds (Milkweed).

This is to be distinguished from pappus, which is a tuft on the fruit (Achene).

(2) **Parts of Nucleus:**





Embryo (*e*), the initial plantlet.

Caulicle or *Radicle* (*r*),  the rudimentary stem or first internode.


Cotyledon (*c*), the seed-leaf at the primary node.

Plumule (*p*), the growing points above the cotyledons.

Albumen (*a*),  the food for the plantlet's first growth, stored outside the embryo.

KINDS.—(1) **General Form:** *Orthotropous*, ; *campylotropous*,

tropous,  and *andropous*, ; *amphitropous*,

 same as in ovule.


(2) **Form of Covering:**

Conformed, adhering closely to nucleus.

Cellular, loose (Pyrola).

Winged,  having expanded appendages (Catalpa).


Woolly, covered closely with fibers (Cotton).

Cômonose,  with coma at the end (Milkweed, Willow Herb).




(3) Texture of Albumen :

Farinaceous, mealy (Wheat).*Corneous*, horny (Coffee).*Oily*, mealy but mixed with oil (Poppy).*Mucilaginous*, like mudlage (Morning-glory).*Ruminated*, wrinkled (Papaw).




(4) Number of Cotyledons :

Monocotylédonous,  (Corn).*Dicotylédonous*,  (Bean).*Polycotylédonous*,  (Pine).

(5) Position of Embryo with regard to Albumen :

Axial,  in the center of albumen (Violet).*Eccentric*,  embryo on one side of albumen (Indian Corn).*Peripheric*,  curved around albumen (Four-o'clock).*Basal*,  at the base, either within or outside the albumen (Peony).

(6) Arrangement of the Parts of Embryo :

Straight,  (Pumpkin).*Coiled*,  (Potato).*Accumbent*,  applied to the cotyledons when the caulicle is bent and lies along their edge (Water-cress).*Incumbent*,  applied to the cotyledons when the caulicle rests against the back of one of them (Shepherd's Purse).*Conduplicate*,  applied to cotyledons that are incumbent and so folded as to embrace the caulicle (Mustard).

(7) The Direction of the Embryo as respects the Pericarp :

Ascending, caulicle pointing to the apex of the fruit.*Descending*, pointing to the base.*Centripetal*, pointing to the axis.*Centrifugal*, pointing to the sides.

Useful Words and Signs not given in the preceding pages.

Habitat, the situation or country in which the plant naturally grows.*Terrestrial*, growing on land.*Aquatic*, growing in water.*Submerged*, under water.*Floating*, on the surface.*Parasitic*, growing on other plants and feeding on their juices (Mistletoe).*Root-parasites*, those which are attached to other plants below ground (Pine-sap).*Epiphytes*, or *aerophytes*, those which, though generally growing upon other plants, receive their food from the air (many cultivated Orchids).*Acaulescent*, or *stemless*, apparently without a stem; the true stem, bearing leaves and flowers, being very short (Dandelion) or, if long, subterranean (Calamus).*Caulescent*, or *leafy-stemmed*, with a distinct stem above ground.*Ezcurrent*, main trunk or rib extending to the tip (Spruce-tree, Chestnut-leaf).*Deliquescent*, trunk or rib soon dividing (Apple-tree, Catalpa-leaf).*Disk flowers*, the flowers of the center of the head in such clusters as the Sunflower.*Ray flowers*, the ligulate flowers of the border.*Discoid*, head without ray flowers.*Radiate*, with both disk and ray flowers.*Stipitate*, furnished with a stipe or stalk, as the pod of many plants (Cleome).*Beaked*, furnished with a prolonged, narrow tip.*Glandular*, bearing glands or organs actually or apparently secreting a fluid, which is often aromatic.*Capillary*, slender, hair-like.

In giving the size of parts, the sign of degrees (°) should be used for feet; of minutes (') for inches; of seconds (") for the twelfths of inches, or lines. The line is nearly equal to two millimeters.

Fractions placed by the side of drawings denote the size of the figure as compared with the object represented. $\frac{1}{2}$ indicates natural size; $\frac{2}{3}$, $\frac{3}{4}$, $\frac{20}{100}$, etc., indicate by the numerator the number of times the figure has been increased in diameter; $\frac{1}{2}$, $\frac{1}{100}$, etc., indicate by the denominator the number of times the figure has been reduced in diameter.

A short dash (—) indicates "to," as 3'—8' long.

♂ Staminate.

♀ Pistillate.

∞ Many.

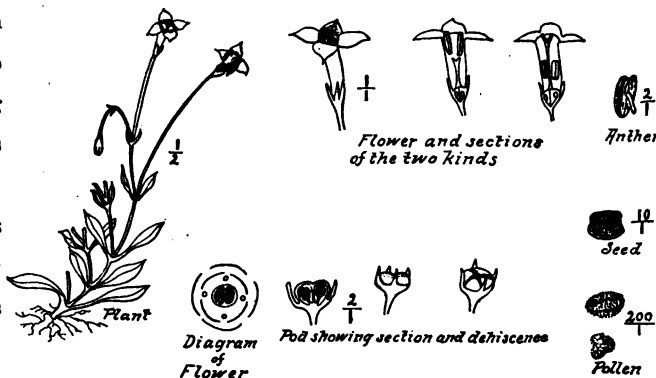
ORDER OF DESCRIPTION.

15

(Specimen Page 1.)

Root	Multiple, slender, fibrous, much-branched.
Stem	Herbaceous, erect, branching, terete, glabrous, 4'.
Leaves	Opposite, simple, sessile, indistinct, oblong to spatulate, acute, entire, glabrous, 3' by 10'; a stipular line joins the leaves.
Flowers	Solitary, terminal, erect, regular; bracts none; stem slender, 1' long.
Calyx	Green, cup, cleft, half-inferior.
Sepals	4, pointed, smooth, valvate, persistent.
Corolla	Light blue, yellow eye, salver, cleft, perigynous.
Petals	4, ovate, pointed, smooth, valvate.
Stamens	4, distinct, epipetalous, alternate, very short.
Anthers	Yellow, oblong, versatile, 2 celled, longitudinal, oval.
Pistil	1; style 1, slender, long or short.
Stigma	2, oblong, rough with upwardly oblique hairs.
Ovary	Broad, rounded, half-superior, 2 celled, basal.
Fruit	Dry pod, notched at apex, rounded, smooth, loculicidal.
Seeds	Several in each cell, cup-shaped, embryo large in albumen.

Remarks.—A delicate plant, with abundance of lavender-blue to white flowers, blooming from earliest spring to midsummer, in meadows. It grows in tufts, branching dichotomously. When the style is long, the stamens are near the bottom of the tube; when short, near the top. These forms occur in separate tufts.



Classification.—Gamopetalous exogen. Rubiacæ.

Name.—*Houstonia cœrulea*, L. (Bluets. Innocence.)

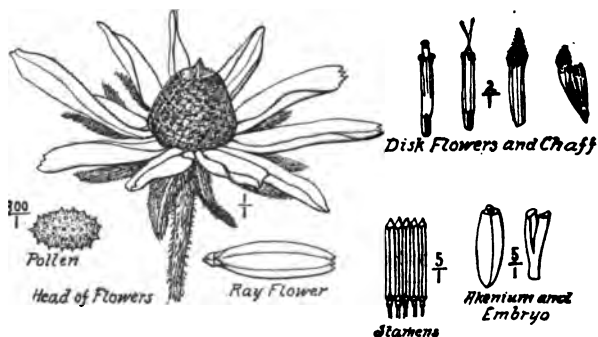
Locality and Date.—Trenton, N. J., May 23, 1892.

ORDER OF DESCRIPTION.

(Specimen Page 2.)

Root	Primary, multiple, thickish, biennial.
Stem	Herbaceous, erect, branching, terete, grooved, hirsute, 2°.
Leaves	<i>Radical</i> simple, 3 ribbed, oblanceolate, long-petiolate, obtuse, entire, hairy. <i>Cauline</i> few, alternate, sessile, rough-hairy.
Flowers	Terminal heads of about 10 ray flowers and many disk flowers; <i>receptacle</i> chaffy,
Calyx	Superior. with large, spatulate, hairy, purple bracts; <i>involucre</i> green, of one
Sepals	No pappus. set of large, spreading, hairy scales.
Corolla	<i>Rays</i> bright orange, ligulate; <i>disk</i> dark purple, tubular.
Petals	<i>Ray flowers</i> about 3 lobed; <i>disk flowers</i> 5 lobed, valvate.
Stamens	<i>Ray flowers</i> none; <i>disk flowers</i> 5, syngenesious, epipetalous, short.
Anthers	Linear, 2, porous, oblong, rough, pointed.
Pistil	<i>Ray flowers</i> none; <i>disk flowers</i> 1; style long, 2 cleft.
Stigma	2, slender, somewhat curved, stigmatic on inner side.
Ovary	Quadrangular-top shaped, inferior, 1 celled, basal.
Fruit	Oblong-rectangular, smooth, black, achene.
Seeds	1, oblong; embryo anatropous, without albumen.

Remarks.—A very rough, bristly-hairy plant, branching from the base, with large heads of bright orange ray flowers and dark purple disk flowers. Introduced from the west into eastern meadows, and spreading quite rapidly.



Classification.—Gamopetalous exogen. Compositæ.

Name.—*Rudbeckia hirta*, L. (Black-eyed Susan. Cone-flower.)

Locality and Date.—Ewing, N. J., August 6, 1892.

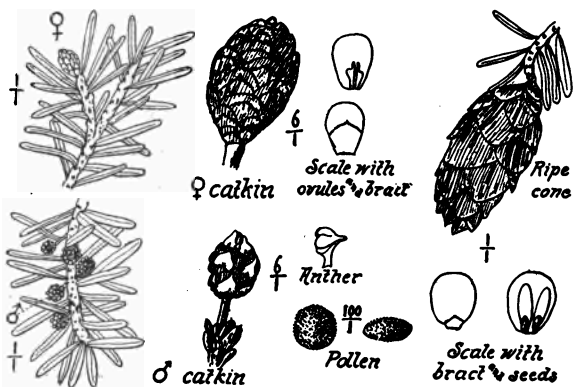
ORDER OF DESCRIPTION.

17

(Specimen Page 3.)

Root	Perennial.
Stem	Arboreous, erect, excurrent; branchlets pendulous; bark reddish; 60°.
Leaves	Scattered, 2 ranked, evergreen, linear, obtuse, smooth, entire, dark green, white beneath, 1' by 6', buds scaly.
Flowers.....	Catkins, ♀ terminal, oval, soon drooping; ♂ axillary, globular; bracts of the ♀
Calyx.....	None. scales broad, with ciliated and somewhat pointed ends; ♂ catkins
Sepals.....	without bracts. When the ♀ catkin bursts from the bud scales only
Corolla.....	None. the bracts show, but soon the scales protrude.
Petals.....	
Stamens.....	About 10 to the catkin, distinct, short.
Anthers.....	Heart shaped at top, 2 celled, confluent, transverse, globular, flattened.
Pistil.....	None; scales in cones.
Stigma.....	None; ovules naked and fertilized by direct action of pollen.
Ovary.....	None; 30 carpel scales in axils of persistent bracts.
Fruit.....	Elliptical cone, 4' by 10'; scales thin, rounded, ripe in one year.
Seeds	2 to each scale, winged; embryo small in abundant albumen; cotyledons 3.

Remarks.—A tall, round-headed tree, with light, spreading or drooping spray, dark green foliage, silvery beneath; cones small, brown, pendent, ripe in autumn. Common in cultivation as well as wild. Old trunks with long, shallow furrows in the bark.



Classification.—Gymnospermous exogen. Coniferae.

Name.—*Tsuga Canadensis*, Carr. (Hemlock.)

Locality and Date.—Trenton, N. J., May 10, 1892.

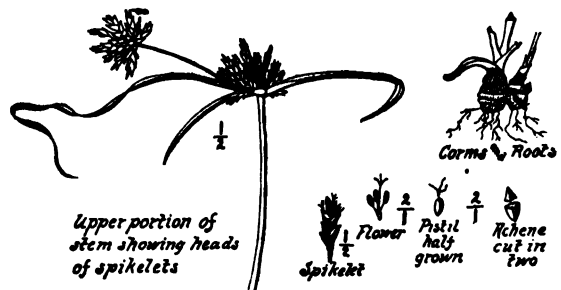
ORDER OF DESCRIPTION.

(Specimen Page 4.)

Root.....	Secondary, fibrous, from rounded, clustered corms.
Stem.....	Herbaceous, ascending, triangular, slender, smooth.
Leaves.....	<i>Radical</i> nerved, linear, sheathing, entire, smooth, 8' by 1'. <i>Cauline</i> 3-4, in an involucre, similar to those which are radical.
Flowers.....	In 1-4 heads of spikelets, 1 sessile, 0-3 pedicellate in an irregular umbel; <i>spikelet</i>
Oalyx.....	None. of 4-8 flowers inclosed in broad, abruptly pointed, nerved, 2 ranked,
Sepals.....	green glumes, rounded on the back and with scarious and somewhat
Corolla.....	None. brownish margins.
Petals.....	
Stamens.....	3, distinct, hypogynous, slender, rather short.
Anthers.....	Gray, ovate, innate, 2 celled, longitudinal.
Pistil.....	1; style 1, slender, single to the stigmas.
Stigma.....	3, slender, linear, curved.
Ovary.....	Ovate-triangular, superior, 1 celled, basal.
Fruit.....	Triangular, smooth, achene, indehiscent.
Seeds.....	1, triangular, smooth; minute embryo at base of albumen.

Remarks.—A slender, wiry sedge, growing abundantly in rather dry, sandy soil.

There is frequently but one sessile head of 20-40 spikelets to the culm; if more than one, then all but one are pedicellate. The stems grow obliquely from the cluster of ovate corms.



Classification.—Glumaceous endogen. Cyperaceæ.

Name.—*Cyperus filiculmis*, Vahl. (Slender Galingale).

Locality and Date.—Trenton, N. J., September 3, 1892.

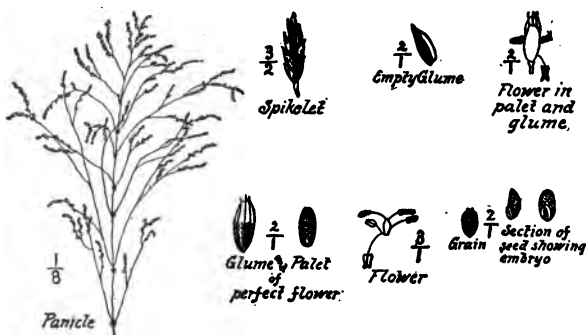
ORDER OF DESCRIPTION.

19

(Specimen Page 5.)

Root	Heavy, branching, perennial.
Stem	Herbaceous, erect, hollow culm, smooth, 5°.
Leaves	Alternate, with split sheath and hairy ligule, nerved, linear, taper-pointed, entire, flat, smooth, 1° by 4'.
Flowers	Panicle, the rigid capillary branches broadly spreading. <i>Spikelets</i> purple, lanceo-
Ocalyx	None. late, 5-7 flowered, the rhachis with bearded joints; <i>empty glumes</i>
Sepals	unequal, indistinctly veined, acute pointed; <i>flowering glume</i> convex,
Corolla	None. 3-cuspidate and with 3 hairy lines near base; <i>palet</i> smooth, thin,
Petals	naked.
Stamens	3, distinct, hypogynous, long, capillary.
Anthers	Oblong, versatile, 2 celled, separated, longitudinal.
Pistil	1; styles 2, slender, divided to ovary.
Stigma	2, slender, feathered.
Ovary	Obovate, superior, 1 celled, free from palet.
Fruit	Ovate, smooth, grain, indehiscent.
Seeds	1, small; eccentric embryo in albumen.

Remarks.—A tall, perennial, showy grass with a large, spreading, purple panicle; growing along the fences of sandy fields. The leaves are firm, broad, and flat. The ligules are represented by hairs. The spikelets are arranged along the tips of the branches almost in spikes.



Classification.—Glumaceous endogen. Gramineæ.

Name.—*Triodia cuprea*, Jacq. (Tall Red-top).

Locality and Date.—Trenton, N. J., August 3, 1892.

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

21

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Oalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

23

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Oalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

25

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

27

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

29

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

31

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
 Stem
 Leaves

 Flowers
 Calyx
 Sepals
 Corolla
 Petals
 Stamens
 Anthers
 Pistil
 Stigma
 Ovary
 Fruit
 Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

33

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

35

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

37

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Ocalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

39

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Ocalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

41

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Oalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

43

Stamens.— Number, cohesion, adnation, filament.

Anthers.— Color, form, adnation, cells, dehiscence, pollen.

Pistil.— Number (as to the ovary), styles, cohesion.

Stigma.— Number, form, surface.

Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.

Seeds.— Number, form, surface, embryo.

Classification.— Division (cohort), class (province), order.

Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Ocalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

37

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

39

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

41

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

43

Stamens.— Number, cohesion, adnation, filament.

Anthers.— Color, form, adnation, cells, dehiscence, pollen.

Pistil.— Number (as to the ovary), styles, cohesion.

Stigma.— Number, form, surface.

Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.

Seeds.— Number, form, surface, embryo.

Classification.— Division (cohort), class (province), order.

Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

45

Stamens.— Number, cohesion, adnation, filament.

Anthera.— Color, form, adnation, cells, dehiscence, pollen.

Pistil.— Number (as to the ovary), styles, cohesion.

Stigma.— Number, form, surface.

Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.

Seeds.— Number, form, surface, embryo.

Classification.— Division (cohort), class (province), order.

Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

39

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
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Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

41

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

43

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

45

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
 Stem
 Leaves

 Flowers
 Calyx
 Sepals
 Corolla
 Petals
 Stamens
 Anthers
 Pistil
 Stigma
 Ovary
 Fruit
 Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

47

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

49

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks****Drawings.****Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

41

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

43

Stamens.— Number, cohesion, adnation, filament.

Anthers.— Color, form, adnation, cells, dehiscence, pollen.

Pistil.— Number (as to the ovary), styles, cohesion.

Stigma.— Number, form, surface.

Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.

Seeds.— Number, form, surface, embryo.

Classification.— Division (cohort), class (province), order.

Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

45

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

39

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks****Drawings.****Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

41

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

43

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Oalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

45

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

47

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

49

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves

Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

51

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

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Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adhesion.

Sepals. — Number, form, surface, maturation.

Corolla. — Color, form, cohesion, adhesion.

Petals. — Number, form, surface, maturation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

53

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
Stem
Leaves

Flowers
Ocalyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

47

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

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Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

49

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
Flowers
Ocalyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

51

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

53

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
Stem
Leaves

Flowers
Oalyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

55

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, vening, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

57

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks****Drawings.****Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

59

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, activation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, activation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

61

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, pella, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Oalyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

63

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

.....

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

65

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves

Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

67

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

69

Stamens.—Number, cohesion, adnation, filament.

Anthera.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

71

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

73

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

75

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

77

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

79

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Ocalyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

81

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

83

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves

Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

85

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

87

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

89

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

.....

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

91

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks****Drawings.****Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

93

Stamens.—Number, cohesion, adnation, filament.
Anthera.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

95

Stamens.— Number, cohesion, adnation, filament.

Anthers.— Color, form, adnation, cells, dehiscence, pollen.

Pistil.— Number (as to the ovary), styles, cohesion.

Stigma.— Number, form, surface.

Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.

Seeds.— Number, form, surface, embryo.

Classification.— Division (cohort), class (province), order.

Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

97

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves

Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

.....

Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

99

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

101

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, aestivation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

103

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, surface, aestivation.

Corolla. — Color, form, cohesion, adnation.

Petals. — Number, form, surface, aestivation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

105

Stamens.—Number, cohesion, adnation, filament.

Anthers.—Color, form, adnation, cells, dehiscence, pollen.

Pistil.—Number (as to the ovary), styles, cohesion.

Stigma.—Number, form, surface.

Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.

Seeds.—Number, form, surface, embryo.

Classification.—Division (cohort), class (province), order.

Name.—Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

107

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, activation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, activation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

109

Stamens.—Number, cohesion, adnation, filament.**Anthers.**—Color, form, adnation, cells, dehiscence, pollen.**Pistil.**—Number (as to the ovary), styles, cohesion.**Stigma.**—Number, form, surface.**Ovary.**—Form, adnation, number of cells, placentation.**Fruit.**—Form, surface, kind, dehiscence.**Seeds.**—Number, form, surface, embryo.**Classification.**—Division (cohort), class (province), order.**Name.**—Genus, species, common name.

Root**Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.

Classification**Name****Locality and Date**

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks****Drawings.****Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

111

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root
Stem
Leaves
.....
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks
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Drawings.

Classification
Name
Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

113

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves
Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

115

Stamens.— Number, cohesion, adnation, filament.
Anthers.— Color, form, adnation, cells, dehiscence, pollen.
Pistil.— Number (as to the ovary), styles, cohesion.
Stigma.— Number, form, surface.
Ovary.— Form, adnation, number of cells, placentation.

Fruit.— Form, surface, kind, dehiscence.
Seeds.— Number, form, surface, embryo.
Classification.— Division (cohort), class (province), order.
Name.— Genus, species, common name.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.

Stem.—Character, direction of growth, form, surface, height.

Leaves.—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers.—Arrangement, kind, bracts, stem.

Calyx.—Color, form, cohesion, adnation.

Sepals.—Number, form, surface, activation.

Corolla.—Color, form, cohesion, adnation.

Petals.—Number, form, surface, activation.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

117

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), style, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root

Stem

Leaves

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Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root.—Class, kind, duration.**Stem.**—Character, direction of growth, form, surface, height.**Leaves.**—Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.**—Arrangement, kind, bracts, stem.**Calyx.**—Color, form, cohesion, adnation.**Sepals.**—Number, form, surface, aestivation.**Corolla.**—Color, form, cohesion, adnation.**Petals.**—Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks****Drawings.****Classification****Name****Locality and Date**

ORDER OF DESCRIPTION.

119

Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
 Stem
 Leaves

 Flowers
 Calyx
 Sepals
 Corolla
 Petals
 Stamens
 Anthers
 Pistil
 Stigma
 Ovary
 Fruit
 Seeds

Remarks

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Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.

Stem. — Character, direction of growth, form, surface, height.

Leaves. — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.

Flowers. — Arrangement, kind, bracts, stem.

Calyx. — Color, form, cohesion, adhesion.

Sepals. — Number, form, surface, retention.

Corolla. — Color, form, cohesion, adhesion.

Petals. — Number, form, surface, retention.

Root

Stem

Leaves

Flowers

Calyx

Sepals

Corolla

Petals

Stamens

Anthers

Pistil

Stigma

Ovary

Fruit

Seeds

Remarks

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

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Stamens.—Number, cohesion, adnation, filament.
Anthers.—Color, form, adnation, cells, dehiscence, pollen.
Pistil.—Number (as to the ovary), styles, cohesion.
Stigma.—Number, form, surface.
Ovary.—Form, adnation, number of cells, placentation.

Fruit.—Form, surface, kind, dehiscence.
Seeds.—Number, form, surface, embryo.
Classification.—Division (cohort), class (province), order.
Name.—Genus, species, common name.

Root
Stem
Leaves

Flowers
Calyx
Sepals
Corolla
Petals
Stamens
Anthers
Pistil
Stigma
Ovary
Fruit
Seeds

Remarks

.....

Drawings.

Classification

Name

Locality and Date

ORDER OF DESCRIPTION.

Root. — Class, kind, duration.**Stem.** — Character, direction of growth, form, surface, height.**Leaves.** — Arrangement, kind, veining, form, base, apex, margin, surface, texture, size, stipules.**Flowers.** — Arrangement, kind, bracts, stem.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, surface, aestivation.**Corolla.** — Color, form, cohesion, adnation.**Petals.** — Number, form, surface, aestivation.**Root****Stem****Leaves****Flowers****Calyx****Sepals****Corolla****Petals****Stamens****Anthers****Pistil****Stigma****Ovary****Fruit****Seeds****Remarks**

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Drawings.**Classification****Name****Locality and Date**

INDEX OF SCIENTIFIC AND COMMON NAMES.

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Place the names, both scientific and common, under their respective letter headings.

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